REMARKS:

Status Of Claims

Claims 1-41 were previously pending in the application. Claims 42-44 has been added. Thus, claims 1-44 are currently pending in the application with claims 1, 11, 19, 23, 34, and 44 being independent.

Office Action

In the office action, the Examiner rejected claims 1-18 and 23-40 under 35 U.S.C. 102(e) as being anticipated by Michaelson et al., U.S. Patent No. 6,734,808. The Examiner also rejected claims 19-22 under 35 U.S.C. 103(a) as being unpatentable over Horvath et al., U.S. Patent No. 6,473,003. The Examiner also rejected claim 41 under 35 U.S.C. 103(a) as being unpatentable over Michaelson in view of Horvath. Applicant respectfully submits that the currently pending claims distinguish the present invention from Michaelson, Horvath, and the other prior art references of record, taken alone or in combination with each other.

Specifically, claim 1 recites "analyze a course between a first location and the ***potential waypoint*** in view of preselected conditions", emphasis added.

As stated on page 7, lines 1-4:

> Embodiments of the present invention also allow for a course to be analyzed between the first location and one or more waypoints, where cartographic data, including marine craft data, for the area between the first location and the waypoints can be analyzed to determine whether preselected conditions are present along the course.

As stated on page 7, lines 18-24:

In addition, the processor 310 further operates on the marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of preselected conditions of the cartographic data, including the marine craft data. So, for example, the processor 310 can operate on the route calculating algorithm to analyze the cartographic data, including the marine craft data, to identify and avoid preselected conditions in the course being calculated between the first location and the potential waypoint.

As stated on page 8, lines 4-10:

In a situation where the processor 310 operating on the marine route calculation algorithm identifies one or more preselected conditions in analyzing the course, the processor 310 operates on the route calculating algorithm to re-route the course to avoid the preselected conditions. In one embodiment, in routing and/or re-routing the course to avoid the preselected conditions, the processor operates on the route calculating algorithm to identify one or more non-user waypoints between the first location and the potential waypoint.

As shown in figures 4A and 4B, and stated on page 12, line 18, through page 13, line 4:

Figure 4A illustrates course 404 between a first location 410 and a potential waypoint 414 that passes through land 416. In the present embodiment, the first location 410 is shown as a first waypoint that has been selected by a user. As described herein, land can be classified as a preselected condition. As such, course 404 has been highlighted to indicate that at least one preselected condition has been identified in the analysis of course 404. Highlighting in the instant case is provided by a bolding of the line representative course 404 in a region 418. At this point, the device can calculate one or more possible courses around the preselected condition.

Figure 4B provides map display 400 having course 403 recalculated to avoid the one or more preselected conditions (e.g., avoid the land in region 418 of the previous course 404). Recalculating of course 403 relative to the original calculation of course 404 shown in Figure 4A provides the recalculated course 403 with one or more additional waypoints, shown as

420. The additional waypoints 420 have been included to allow the course 403 to avoid the preselected conditions. The waypoints 420, in the present situation, are non-user waypoints. In other words, waypoints 420 were determined by the system, and not the user. Embodiments however are not so limited. In an additional embodiment, the user can indicate waypoints to be used and/or alter waypoints that are provided by the system.

Therefore, the above discussed portions of the instant application make it clear that the waypoints, between which a course is analyzed, are not simply projections along a vessel's present heading. For example, as shown in figure 4A, if it is assumed that the vessel is heading toward waypoint 410, along course 404, then the portion of course 404 between waypoints 410 and 414 is clearly not a projection along the vessel's present heading. It is at least that portion of course 404, between waypoints 410 and 414, that is being analyzed for the preselected conditions. Furthermore, neither of waypoints 410 or 414 are necessarily even related to the vessel's current location. Thus, the waypoints of the present invention are simply not defined by a vessel's present heading or current location.

In contrast, Michaelson's invention is strictly limited to analyzing a "look ahead distance". Specifically, Michaelson determines a vessel's current location and present heading, or a direction the vessel is travelling. Then, Michaelson looks for bottom hazards from the vessel's current location extending for specified look ahead distances along the vessel's present heading. Therefore, Michaelson's warning system is limited to projections from the vessel's current location along the vessel's present heading. There is simply no disclosure of waypoints, as defined in the present specification and used in the currently

pending claims. As Michaelson fails to disclose waypoints, as defined in the present specification and used in the currently pending claims, Michaelson fails to disclose "analyze a course between a first location and the ***potential waypoint*** in view of preselected conditions", as claimed in claim 1.

Claim 10 defines the preselected conditions as being "selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas".

As stated on page 6 of the present specification, lines 11-20:

> Preselected conditions can include user identified parameters, and any values associated with the parameters, that are associated with geographical conditions of particular interest. For example, preselected conditions a user can select include, but are not limited to, indications of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles (e.g., bridges), underwater obstacles (e.g., submerged wrecks), type of water bottom, and prohibited areas, to name only a few. The preselected conditions, and their associated values, can be selected and programmed by a user through, for example, controlling one or more input menus on display screen 340 with the location input 320.

Thus, the method of the present invention, as claimed in claims 1 and 10, analyzes a course for one or more preselected conditions, such as conditions to be avoided like "land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas".

By way of example, suppose a user intends to use the present invention on a small and light fiberglass canoe. In this case, the user may be primarily concerned with rocks, having the ability to portage their boat over land, but not wanting to risk impact with the rocks. The user would pre-select rocks, thereby configuring the present invention to calculate a route avoiding any rocks.

By way of another example, suppose a user intends to use the present invention on a large ocean going ship. In this case, the user may simply select a water depth greater than the ship's draft, thereby avoiding any possible grounding problems. It is important to note that, as claimed in claims 1 and 10, these conditions must be "preselected".

In contrast, Michaelson's system must dynamically determine his conditions to be avoided. Specifically, as Michaelson discloses in column 8, lines 48-49, "the present invention addresses hazards related to submerged vessels", such as submarines. Simply put, in Michaelson, the water depth that presents a hazard changes dynamically with the submarine's current depth, and therefore cannot be "preselected", as claimed in the present claims.

For example, as stated in Michaelson, column 8, lines 23-28:

> Navigation system 14 also stores data or retrieves input from other shipboard systems as needed to compute the maximum bull depth. In the case of a submerged submarine, this parameter can be computed or obtained directly from on board pressure instrumentation such as a fathometer designed to measure depth below the surface.

Since submarines can be at virtually any depth, and therefore need to avoid

obstacles conflicting with a dynamic depth, Michaelson's system must avoid dynamic depths rather than "preselected" depths. In fact, throughout his disclosure, Michaelson teaches generating alerts and course deviations based on dynamic, rather than "preselected", conditions. As a result, Michaelson simply does not disclose, suggest, or make obvious "analyze a course between a first location and the potential waypoint in view of preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas", as claimed in claim 1, much less "receiving the preselected conditions from a user", as claimed in claim 10.

Similarly, claims 11, 19, 23, and 34 are all limited to "preselected conditions". As discussed above, Michaelson fails to disclose waypoints and seeks to avoid dynamic, rather than "preselected", conditions, and therefore does disclose, suggest, or make obvious the limitations of claims 11, 19, 23, or 34.

Furthermore, Horvath fails to disclose waypoints, as defined in the present specification and used in the currently pending claims. Horvath is likewise concerned with dynamic conditions, rather than the "preselected conditions" claimed in claim 19. Rather than Michaelson's submarine, Horvath is concerned with terrain avoidance for aircraft. However, just like a submarine can be at virtually any depth, an aircraft can be at virtually any altitude. Therefore, both Michaelson and Horvath teach of warning against possible impact with obstacles based on a dynamic height above those obstacles and not on any

"preselected condition".

Finally, Horvath also fails to disclose the graphical filter area, as described in the present specification and claimed in claims 19-22 and 41. Specifically, claim 19 recites "analyzing cartographic data within the user defined graphical filter area for preselected conditions".

As stated on page 8, lines 11-25:

> The marine route calculation algorithm can also be used to analyze cartographic data within a user defined graphical filter area (shown as 478 in Figure 4E). In one embodiment, the user defined graphical filter area includes a geographical area defined by a user on the display screen 340. Examples of defining the user defined graphical filter area on the display screen 340 include, but are not limited to, use of the input devices 216 or the display screen 340 itself. For example, a user could draw the user defined graphical filter area using a cursor shown on the display screen 340. The user defined graphical filter area can include an area smaller than the display screen 340.
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> The user defined graphical filter area can also include any number of shapes, including, but not limited to, square, rectangular, triangular, or circular. Other shapes for the user defined graphical filter area are also possible. The user defined graphical filter area can further be positioned and/or repositioned over any number of locations on the display screen 340. In one embodiment, a displayed cursor under the control of one or more of the input devices 216 can be used to position and/or reposition the user defined graphical filter area over any number of locations on the display screen 340.

As stated on page 9, lines 5-13:

> In one example, the dynamic analysis of cartographic data, including the marine craft data, within the defined graphical filter area for preselected conditions allows for a user to be aware of preselected conditions that may be located within the area, but not necessarily at the first location and/or along the course which the device is traveling. In an additional embodiment, analyzing the cartographic data within the defined graphical filter area can be available regardless of whether a calculated course is being used or not.

> In other words, a user need not have a destination point, one or more waypoints (e.g., a potential, or other waypoint) and/or a calculated a course to have the cartographic data analyzed within the defined graphical filter area.

Thus, the term graphical filter area, as used in the present specification and the claims, refers to a user defined ***area*** that is analyzed for the "preselected conditions", instead of or in addition to a potential path of the vessel.

In contrast, Horvath discloses no such functionality. As discussed above, Horvath does not disclose "preselected conditions". In addition, Horvath does not disclose functionality analogous to the graphical filter area of the present invention. The Examiner mistakenly points to Horvath's range indicator as showing this functionality. However, Horvath's range indicator is just that, a circle showing a fixed range from an aircraft. While the circle is useful for showing the aircraft's relation to objects, and for general situational awareness, the area within Horvath's circle is simply not analyzed for anything or even defined in any useful way. For example, as stated in column 7, lines 27-29, "a range ring can be overlaid on a weather, terrain, statutory map, traffic, or other display of a condition near the aricraft". Thus, Horvath simply discloses an overlay which defines, at most, a linear relationship rather than an area. Furthermore, neither that linear relationship nor any area associated with Horvath's range indicator is analyzed. As a result, Horvath does not disclose, suggest, or make obvious "analyzing cartographic data within the user defined graphical filter area for preselected conditions", as claimed in claim 19.

Obviousness, it will be appreciated, can be a problematic basis for rejection because the Examiner, in deciding that a feature is obvious, has benefit of the Applicant's disclosure as a blueprint and guide, whereas one with ordinary skill in the art would have no such guide, in which light even an exceedingly complex solution may seem easy or obvious. Furthermore, once an obviousness rejection has been made, the Applicant is in the exceedingly difficult position of having to prove a negative proposition (i.e., non-obviousness) in order to overcome the rejection. For these reasons, MPEP § 2142 places upon the Examiner the initial burden of establishing a *prima facie* case which requires, among other things, that there be identified some motivation or suggestion in the prior art or in the knowledge of one with ordinary skill to modify the reference or to combine reference teachings. If the Examiner fails to establish the requisite *prima facie* case, the rejection is improper and will be overturned. *In re Rijckaert*, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). Only if the Examiner's burden is met does the burden shift to the applicant to provide evidence to refute the rejection.

Specifically, the Examiner must satisfy three criteria in order to establish the requisite *prima facie* case of obviousness: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine their teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference (or combination of references) must teach or suggest all the claim limitations. MPEP §706.02(j), citing *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991).

In meeting this initial burden, the Examiner "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention". *In re Fine*, 5 USPQ 2d 1596,1600 (Fed. Cir. 1988). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on the applicant's disclosure. *In re Vaeck*, 1442 (Fed. Cir. 1991). Thus, measuring a claimed invention against the standard established by section 103 requires the oft-difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. *See e.g., W. L. Gore & Assoc., Inc. v. Garlock, Inc.*, 220 USPQ 303, 313 (Fed. Cir. 1983).

Furthermore, "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992); *see also In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Additionally, "the mere possibility that one [element] could be modified or replaced ... does not make the [claim] obvious 'unless the prior art suggested the desirability of [such a] modification' or replacement". *In re Brouwer*, 37 USPQ2d 1663 (Fed. Cir. 1995) (citing *In re Gordon*).

In the present case, the prior art references made of record do not teach or suggest each of the claimed limitations. For example, as discussed above, neither Michaelson nor Horvath disclose waypoints or the "preselected conditions" of the present claims.

Furthermore, Horvath fails to disclose "analyzing cartographic data within the user defined graphical filter area for preselected conditions", as claimed in claim 19. As a result, the present obviousness rejections simply cannot be sustained.

Claims 42-44 have been added to further distinguish the present invention over the prior art. The remaining claims all depend directly or indirectly from independent claims 1, 11, 19, 23, and 34, and are therefore also allowable.

Any additional fee which is due in connection with this amendment should be applied against our Deposit Account No. 501-791. In view of the foregoing, a Notice of Allowance appears to be in order and such is courteously solicited.

Respectfully submitted,

By: _____

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